Abstract Plus™ Systems and IT Personnel Requirements

Version 1.0
(Based on Abstract Plus Version 3.1)

Centers for Disease Control and Prevention

National Center for Chronic Disease Prevention and Health Promotion

Division of Cancer Prevention and Control

National Program of Cancer Registries

Registry Plus™ Software for Cancer Registries

Contents

Abstract Plus Features

Abstract Plus version 3.1 is a cancer data collection tool developed by the Centers for Disease Control and Prevention (CDC) and offered free of charge that supports two main functions: abstracting and auditing. Central cancer registries can customize the application for their own use, as well as for distribution to hospitals and other reporting sources. Although Abstract Plus is not designed to include all functionality needed in an American College of Surgeons (ACoS)-approved hospital cancer registry, it is suitable for reporting to central registries from non-registry hospitals, clinics, laboratories, and other cancer data sources. The program also can be used for special projects and start-up registries.

Abstractors and others use Abstract Plus to summarize medical records into an electronic report of cancer diagnosis and treatment. The program supports the abstraction of all data items in national standard data sets, including all text fields, as well as any state-specific data fields. Abstract Plus produces an electronic abstract in the format of the North American Association of Central Cancer Registries (NAACCR) 12.0 data exchange layout.

Abstracts entered into Abstract Plus are validated by customizable edits, allowing for interactive error correction while abstracting. Abstract Plus includes Registry Plus Online Help, a collection of standard coding manuals that are cross-referenced, indexed, and context-linked to minimize the need for abstractors to refer to printed manuals.

The new auditing capability included in Abstract Plus version 3.1 allows central registries to use the program to perform case completeness and data quality audits of reporting facilities, as well as data quality audits of central registry coders. For assessing case completeness, casefinding audits are available, and for assessing data quality, reabstraction and recoding audits are available. The application allows for either blinded or un-blinded reabstraction audits, and for recoding audits, un-blinded submitted text can be recoded for both reporting facilities and central registry coders.

Please note that due to development priorities, Abstract Plus version 3.1 is being released without the Auditor features; the description of Auditor features provided in this manual is for informational purposes only. The Auditor features of Abstract Plus will be released in a future version of the program.

Abstract Plus version 3.1 has been reprogrammed using .NET technology. The application has a new, more user-friendly abstracting interface. New direct grid entry of coded values allows for a more streamlined abstracting experience, as well as easier viewing of text fields, online help, and edit errors.

Abstract Plus version 3.1 also has enhanced security features. All records are saved in Microsoft® Access or SQL Server databases, and all tables are password-protected and encrypted using Microsoft functions. All users must have a user ID and password to access the application, and access to administrative and auditor functions requires a special restricted password. A security challenge question feature allows users to reset their passwords securely without administrator intervention.

Abstract Plus System Requirements

Changes from Abstract Plus version 2 to version 3.1

- NAACCR record layout from 11.x to 12
- New audit features
- Reprogrammed using .NET technology
- New, more user-friendly abstracting interface
- Direct grid entry of coded values for streamlined abstracting
- Easier viewing of text fields, online help, and edit errors
- Enhanced security for login and database access
- More application preference selections
- SQL Server, multi-user option

Abstract Plus version 3.1 can run in file-server or client-server mode for abstracting. It stores abstracting and audit information in separate databases. If it is running in client-server mode, the abstract database is stored on a server computer and the client application runs on individual workstations. As part of the installation package, Abstract Plus comes with Microsoft Access as the default database. To use multi-user functionality, the abstract database must be moved to Microsoft SQL Server before implementing the production environment (please see Installing Abstract Plus~~Installing Abstract Plus~~). This database can be put on the same server that hosts CRS Plus, Prep Plus, and Web Plus databases. A dedicated server is not required. If Abstract Plus is running in file-server mode, the databases can be put on a shared network drive as a Microsoft Access database.

Abstract Plus is programmed for a Microsoft Windows 32-bit environment installed on an Intel® Pentium or Pentium-compatible computer. The application also can be installed on a 64-bit environment. The Microsoft .NET version 3.5 framework is required. During installation, Abstract Plus automatically downloads the appropriate files from Microsoft's Web site if the user has access to the Internet. If the files cannot be downloaded from Microsoft's Web site, they can be downloaded manually from the folder containing the Abstract Plus installation files, in the subfolder Required Microsoft Installs.

The minimum hardware requirements are the same as those of the Microsoft Windows operating system used. Additional system requirements include:

- Microsoft operating system Windows XP or later

- 128 MB RAM (512 MB minimum recommended)

- Latest version of Microsoft Internet Explorer (recommended)

- The available hard-disk space requirement for Abstract Plus depends on the number of abstracts that will be created and maintained in the database. A minimum of 70 MB of free hard drive space is required.

Database server

The table below lists the specifications for the database server computer that is assumed to be installed within a larger information technology (IT) infrastructure with connectivity, security, and operational features established by local policy. Some local Microsoft Access databases can be

located either on the client computers or on a shared network drive. Users need full access to the database path and subfolders. Some space also may be required for storing text data files on the shared drive. The space required on the shared drive depends on the amount of data the central cancer registry receives each year and how often the drives are archived.

System Component	Database Server Computer
RAM	2 GB; more memory will result in better performance
Hard disk	RAID-5 for data, RAID-1 for log files
Size of data file	(3 * 7000 * estimated_number_of_cases) / 1048576 MB
System drive for caching	At least 2GB of free space
CPU	Dual or better processor with latest processor speed
Operating system	Microsoft Windows Server 2000/2003/2008 (Server 2008 Enterprise meets the NIST FIPS 140-2 standard)
Database server	SQL 2000/2005/2008

Note: The above specification is for a dedicated server only. If other services and applications are running on this server, more RAM and hard disk space may be required.

Client computer

The table below lists specifications for the client computer. Users require full access to the installation path and application subfolders.

System Component	Client Computer
RAM	500 MB or more
Hard disk	200 MB of free space
Operating system	Microsoft Windows XP or later
.NET framework	Version 3.5 or later

Installing Abstract Plus

Download the installation file as instructed. The generic installation is available from the National Program of Cancer Registries' Web site (http://www.cdc.gov/cancer/npcr/), and customized installations are available from NPCR's FTP site. You should have received the FTP site and file information in an e-mail from NPCR. The generic installation can be used only if no changes are required from default settings, before distribution. After downloading the installation file, double-click on it to start the installation wizard and follow the screen prompts to complete the installation process. Abstract Plus version 3 can be installed without uninstalling version 2. Consecutive installations require uninstalling the previous version 3. After installation, the Abstract Plus version 3 program is accessible by opening the Start menu and selecting All Programs, Registry Plus, Abstract Plus 3, and Abstract Plus 3. Abstract Plus comes with a default database in Microsoft Access format, but the Microsoft Access application is not required to run Abstract Plus.

Installation without .NET 3.5 or Internet access

If you cannot connect to the Internet or not allowed to download files from Microsoft's Web site, the installation may fail and require you to download, unzip, and run Dotnetfx35.zip and VisualBasicPowerPacks3Setup.zip. They are located with the installation in the subfolder /Required Microsoft Installs/. Please contact support if you cannot install the program successfully.

The following files also are included in the installation:

- dotNetFx35setup.exe and dotNet35SP1Readme.htm: .NET Framework 3.5 SP1 Install and Read Me files.

- MDAC2.8 Install_TYP.EXE: Installation file for MDAC 2.8, which is used to create the new audit databases.

- MDAC Version Checker cc_ia64.msi, MDAC Version Checker cc_x64.msi, and MDAC Version Checker cc_x86.msi: These utility files identify which version of MDAC is installed. Most users will use the cc_x86.msi version; however, those using 64-bit Windows Vista will use one of the other two files.

- VisualBasicPowerPacks3Setup.exe and VisualBasicPowerPacks3ReadMe.htm: These are the Power Pack installation and a document.

- WindowsInstaller-KB893803-v2-x86.exe and windows installer 3.1 EULA.doc: You need these files if Windows Installer 3.1 is not installed on your computer. This file is probably installed on your computer if you are using Microsoft Windows XP or later with service pack 2 or later.

Configuring Abstract Plus to work with a SQL Server database

1. Prepare your database on Microsoft SQL Server.

   a) Create a database and database user account(s) on Microsoft SQL Server; the user account should have both read and write access to the database.

   b) After creating the database, import all tables from C:\RegPlus\AbsPlus\MDBS\Master.mdb to the newly created database **or** run the SQL scripts provided for updates. First run CreateMasterDBwIndexes.sql and then run MasterDBRecords.sql to add default records.

2. Login to the application.

   a) From the main menu, select Administration, Application Preferences.

   b) Select the Database tab, select the SQL Server option, and enter the appropriate connection string. Use the example connection strings below depending on the practice of your organization. Set Network Library to dbnmpntw if you use named-pipe, or dbmssocn if you use TCP/IP to connect to the database. Modify the parameters to match your settings.

      - **SQL Server connection using standard security:**
        Provider=SQLOLEDB.1
        Persist Security Info=True
        User ID=DCPC_AbsPlus_appusr

Initial Catalog=DCPC_AbsPlus
Data Source=QCCD-KRH-DEVL40
Password=DCPC_AbsPlus_appusr
Network Library=dbnmpntw

- **SQL Server connection string using trusted connection:**
  Provider=SQLOLEDB.1
  Persist Security Info=True
  Integrated Security=SSPI
  Initial Catalog=DCPC_AbsPlus
  Data Source=QCCD-KRH-DEVL40
  Network Library=dbnmpntw

c) Select Save and close the window.

d) Select File, Exit and respond to prompt to exit without creating a backup.

e) Future logins will connect to the SQL Server database, and SQL Server will be indicated with the application name on login.

If you have questions about setting up the application in a production environment, your technical support personnel can send e-mail to cdcinfo@cdc.gov.

Configuring Abstract Plus to work with an alternate database path

(such as a shared server Microsoft Access database)

1. Refer to Preferences Database Tab options to set the database path.

2. Copy the required files AbsPlus.mdb, AbstractPlus.mdw, and Master.mdb from the application default database path (C:\RegPlus\AbstractPlus\MDBS) to the designated alternate database path, after all options have been selected.

Abstract Plus Abstracts

Importing abstracts

Abstracts from previous versions of Abstract Plus must be exported to a NAACCR layout text file from the previous application, using the File, Export Abstracts menu option. We recommend that you archive your abstracts (see below) before using the Export All Abstracts option in Abstract Plus version 2.x for import into Abstract Plus version 3.1. The Export All Abstracts option creates a text file in the current NAACCR layout of all complete, incomplete, and held cases. Abstract Plus version 3.1 accepts abstracts in NAACCR record layout versions 11 and 12 from any system.

To import abstracts into Abstract Plus version 3.1, use the File, Import Abstracts menu option. NAACCR record layout version 11 cases will be converted to version 12 upon import. Cases with Collaborative Staging errors are logged in a text file with the import file name and current date stamp. The application will prompt you to view this log file after importing, but you can view it later. Abstracts in NAACCR record layout version 10 or earlier must be converted to version 12 before importing, using the Northcon utility at www.cdc.gov/cancer/npcr/tools/registryplus/up_download.htm.

The data fields that were retired in NAACCR version 12 are not imported unless your registry incorporates them as state-specific fields in your customized version of the program. State-specific fields and local text values are imported with state customized versions.

Archiving abstracts

Normally completed abstracts are exported to a NAACCR layout text file for import to a central registry database. The abstracts are not removed from the current abstracting database. The Abstract Plus administrator must establish maintenance rules to archive completed abstracts. We recommend archiving Microsoft Access databases, which may access or export cases more slowly over time if older abstracts are not archived. Specific completed abstracts can be selected for export and saved through the Export menu as a NAACCR layout text file with a designated name and path, which can be archived and restored through the File menu. After creating the archive file, the archived abstracts can be deleted through the File menu, Delete Abstract(s) option to reduce the size of your database (for example, archive abstracts that are more than five years prior to the current diagnosis year). The archived file must be in NAACCR layout version 11 or 12 to be restored. Archived files in earlier NAACCR layout versions must be converted using the Northcon utility before restoring.

Backing up the abstract database

If you are using a Microsoft Access database, you can back up your database from the File menu. We recommend that you back up your database every time you exit Abstract Plus after adding, importing, or editing abstracts. The backup file is saved with the naming format Absplus_Backup_yyyymmdd_hhmmss.zip (for example, AbsPlus_Backup_20100106_122925.zip for January 6, 2010 at 12:29:25 pm) in the designated folder. In Abstract Plus version 3, the default folder is C:\RegPlus\AbstractPlus\MDBS\Backup. This file can be used to restore the saved state in case of a corrupted database or to roll back a database, from the File menu, Restore. The backup file must be created with the current application version to be restored; you cannot restore a version 2 backup in version 3.

The SQL Server database manager backs up and restores SQL Server databases.

Managing audit databases

You can create audit databases through the Administration menu, and share them with other users (refer to Chapter 6: "Abstract Plus Audit Configuration" of the *Abstract Plus Version 3 Manual for Administrators*). Audit databases that are created through the menu should also be deleted through the menu for that workstation instead of directly through the file path. By default, the audit databases are saved in the application \MDBS\Audit subfolder. These .mdb files can be copied to other workstations' paths for use in auditing, and removed through the file path when the audit is complete.

Abstract Plus Security Features

Authentication

Abstract Plus uses form-based authentication, which requires users to enter their user ID and password to access the application. On initial application login, the user is prompted to create a user ID. The administrator creates all other user IDs. We recommend creating a support user ID if the user is not the administrator. On initial login, the user enters a standard password (Welcome1)

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that must be changed immediately, as well as answers to a required number of security challenge questions.

Passwords

Abstract Plus provides several options to configure user passwords. These options are set by default in the installation and can be changed by the administrator (see Role-Based Access below). Attributes include—

1. Enforcing the complexity of passwords using a regular expression.

2. Requiring new passwords to be different from passwords used before.

3. Forcing users to change their passwords after a specified time interval.

4. Handling lost passwords: The administrator can reset a user's password to the standard password, which must be changed immediately when the user logs in; or users can reset their own passwords by providing the same answers to the challenge questions they provided when they accessed Abstract Plus the first time.

5. Configuring challenge questions: The administrator can set the number of challenge questions and edit the list of challenge question choices.

Role-based access

Abstract Plus uses role-based access, which grants users different access levels depending on their role. Three roles are defined in Abstract Plus:

- **Abstractor:** Abstractors can add, edit, and delete abstracts, and update their own password and challenge questions.

- **Administrator:** In addition to abstractor functions, administrators can perform additional functions such as editing display types and fields, changing user IDs and passwords, setting up audits, and setting application preferences such as security policies and challenge questions. An administrator password is required to perform administrative functions.

- **Auditor:** In addition to the abstractor functions, auditors can perform additional functions such as selecting and opening an audit, performing casefinding, reabstracting, and recoding, and running audit reports. An auditor password is required to perform audit functions.

Database encryption

Abstract Plus includes separate databases for abstracting and audit abstracts. Both databases are encrypted and accessible in the Microsoft Access version outside the Abstract Plus application, with access controlled by user ID and password. Since most of the required access to the databases is available through the Abstract Plus menu, read-only external access is described below. Most external access needed for other applications to enter data and create reports can be done with read-only access. **For full access(required to change table designs), you must work with Abstract Plus support personnel.**

Creating a shortcut to open Abstract Plus Microsoft Access databases
1. In Windows Explorer, right-click on the name of the desired file and click **Create Shortcut.**

2. Drag the shortcut to the desktop.

3. Replace the Target field with the appropriate text below, and database name (**Absplus** or **Master**).

4. Repeat for both databases.

For Access 2007 (one continuous line)–

"C:\Program Files\Microsoft Office\Office12\MSACCESS.EXE" /WRKGRP
"C:\RegPlus\AbstractPlus3\MDBS\AbstractPlus.mdw"

"C:\RegPlus\AbstractPlus3\MDBS\ **Absplus**.mdb"

For Access 2003 (one continuous line) –

"C:\Program Files\Microsoft Office\Office11\MSACCESS.EXE" /WRKGRP
"C:\RegPlus\AbstractPlus3\MDBS\AbstractPlus.mdw"
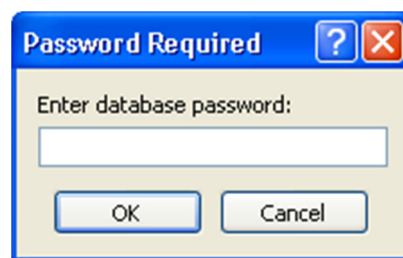
"C:\RegPlus\AbstractPlus3\MDBS\ **Absplus**.mdb"

Opening the Abstract Plus Microsoft Access database from the shortcut

Click on the appropriate database shortcut to open. Read-only rights allow you to view and edit the data. Administrative rights allow you to change the table design.

For read-only access to the selected database, enter Name: **AbsPlus** and Password: **N@tur3** in the Logon dialog box.
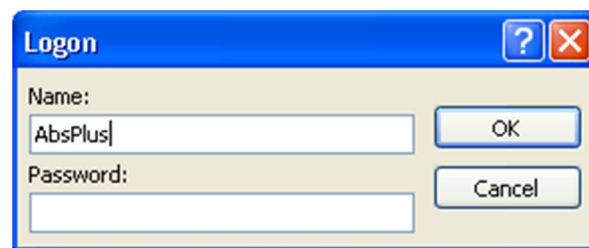
For absplus.mdb, the database password also is required: **Comp@n1ons** (0 – zero)

While either master.mdb or absplus.mdb is open, you can open the other database through the Microsoft Access File menu.

Central Registry Customization of Abstract Plus

A generic (non-customized) version of Abstract Plus is available from CDC's Web site (http://www.cdc.gov/cancer/npcr/registryplus/). This Web site provides fully documented generic installations of the modules, downloadable fact sheets, and version enhancement information. However, most users require a customized version of the software to meet the requirements and procedures of a specific locale(usually a state) or study. **Potential users of Abstract Plus should**

contact their state central cancer registry staff first for their customized version and for support. Contact information can be found at http://apps.nccd.cdc.gov/dcpc_Programs/default.aspx?NPID=3.

If no customized version is available for a state, contact CDC for more information and assistance in preparing a customized version. Before CDC can build a customized Abstract Plus installation file that will work for abstractors reporting abstracts to your central registry, you need to prepare the following items. Refer to online help topics for additional help.

Required configuration specifications

All central registries must complete the following tasks are to ensure that your system is configured and installed optimally to meet your needs. **Refer to the *Abstract Plus Version 3 Manual for Administrators* or online help for further details.** Information to be uploaded to the appropriate CDC FTP site includes:

- Master.mdb (after all menu option customizations have been selected)

- Updated Doctor and Facility tables, if not imported through the menu option

- Optional state local use fields information as requested (any format; document, spreadsheet, etc.)

- Custom edits metafile (any naming convention of the generated runtime metafile (.RMF) file)

- Contact for SQL Server option

Master database

Refer to the *Abstract Plus Version 3 Manual for Administrators* for customization options available from the Administrator menu. These options include selecting application preferences and creating abstracting display types. Creating audit display types and audit databases is not required or intended for custom distribution. Chapter 4: "Abstract Plus Configuration, Selecting Application Preferences" describes the application options. Chapter 4: "Abstract Plus Configuration, Configuring Abstracting Display" explains how to manage display types. Many options will be familiar from Abstract Plus version 2. Local use fields will not be available until the customized installation is created.

Doctor and facility codes

Doctor and Facility code table options have been added to the menu and when used, the changes are reflected in the master.mdb file. Refer to Chapter 4: "Abstract Plus Configuration, Importing Local Hospital and Doctor Codes" of the *Abstract Plus Version 3 Manual for Administrators* for instructions on importing a specified text file of codes or editing the default list. Alternately, you can edit the tables from version 2 and forward them CDC.

Optional local use fields

Abstract Plus supports the inclusion of data items or fields that are defined locally, up to a total of 1,000 characters. The fields can be included in the abstract data entry grid and edited, and choice lists and online help can be provided for the abstractors. CDC support is required to add locally defined fields. It requires local programming expertise, preferably with the ability to manipulate Microsoft Access databases. Local programming support will be needed for the initial setup and to

maintain these fields as Registry Plus versions change. The steps for setting up local use fields are as follows:

1. **Define Local Use Fields:** These fields will be created in the State-Requestor area of the NAACCR record. For each locally defined variable, please provide:

   a. **Item Number.** Assign a unique number in the range 9100–9900.

   b. **Short Name.** The short name corresponds to the item FieldName in the database. Names must conform to the following restrictions, based on SQL Server and Registry Plus requirements.

      • Maximum 17 characters, including letters, symbols, and numbers.

      • The first character must be a letter or the symbols _, @, #. The symbols @ and # have special meaning.

      • Characters following the first character can include letters, digits, or the symbols #, $, or _.

      • By default, no spaces are allowed in identifiers; however, by using quoted identifiers, spaces and other special identifiers can be defined.

      We strongly recommend that the first two characters of the short name be the two-letter abbreviation for your state if you are a state registry or another short identifier if you are not a state registry. For example, TNStatusCode is the short name of a field for the Tennessee state registry called Status Code.

   c. **Longer Name** (maximum 25 characters, embedded spaces allowed). The long name corresponds to the item Description in the database and can be the NAACCR Item Name. This is the default label of the field when it is displayed.

   d. **Length of Field.**

   e. **Custom Lookups.** For fields with a choice list, supply the **value** (with the defined field length) and the **label** (a text description of the meaning of each value, up to 75 characters) to be displayed in the list. A table will be created in the database.

2. **Establish Edits for Local Use Fields (optional).** You may establish locally defined edits for state-specific fields using the Edit Writer application in the EDITS software system, available separately from CDC. This is not required, but is highly recommended to preserve data quality. You may prepare single-field and multiple-field edits. After these edits are written, compiled, and tested in EDITS EditWriter, they can be included in your edit sets and run from within Registry Plus programs. This step is best accomplished by a programmer and certified tumor registrar (CTR) working together.

3. **Prepare Online Help for Local Use Fields (optional).** You can incorporate online help for any fields you defined in step 1 above. Registry Plus provides a default help topic for local use fields. The default help message states that help is not available and to contact the local registry for more details. You may replace the default message with your own message. This requires the help system to be recompiled with assistance from CDC.

Creating edit sets using the EDITS EditWriter program

Abstract Plus uses the edits and edit sets in the EDITS system. A copy of the compiled runtime metafile, with a file extension of .RMF, is copied from the EDITS program directory into the EDITS directory of Abstract Plus. If a Registry Plus user desires to change the edits and edit sets available in the metafile, the changes must be made from within the EDITS system using the Edit Writer (EW) program. This topic provides a very general overview of the process for creating edit sets. The user will need to refer to the documentation for the EDITS system for complete details in using the program.

Edit sets are subsets of all possible edits which can be bundled and run as a set. Since the full NAACCR metafile contains multiple similar edits which contradict each other, it is always necessary to create a subset of edits to run against actual data. The NAACCR metafile contains many edit sets created to correspond to data requirements of standard-setting groups. However, it is anticipated that all users of Registry Plus will need to create their own edit sets corresponding to the Display Types they have established. For example, a user may have established three display types, one for hospital use, one for physicians' offices' use, and one for death-certificate-only abstracts. Each of the three display types would require a separate edit set, since the data items included and their default values would differ.

Before beginning, verify that you have to most recent version of the EDITS software and the current NAACCR metafile by checking NAACCR's Web site, www.NAACCR.org.

To prepare an edit set, complete the following steps. Repeat steps 2–9 for each desired edit set.

1. **Prepare reports in EW** (the Edits Report and Edit Sets Report). These reports are convenient references for use in subsequent steps. It is suggested that you route the reports to a file for subsequent printing, and print pages as needed. The full reports are very large.

2. **Select an edit set** close to the one you will need (e.g., the Sample…), copy it, and name the copy. If you are a staff member at a central cancer registry, use the standard abbreviation for your state as the first two letters in the edit set name. You also may create an edit set from scratch. In our example, if you are creating the three edits sets for Pennsylvania, you might name the edit sets PAHOSP, PADOCTOR, and PACADCOnly.

3. **Select and deselect edits** in the set as needed. Refer to the Edits report or the Edit descriptions online for help in selecting edits. It is helpful to work systematically, data item by data item in the display type, considering all edits available for each data item. You can create a list of available edits for a data item using the Filter feature of the Edits report option. Pay close attention to similar edits. Some edits differ only in the display of blank or unknown data, and it is important to select the edits that correspond to the data collection rules in use locally.

4. **Save** the new edit set.

5. **Generate a runtime metafile.**

6. **Copy the runtime metafile** (the .RMF file) into the Edits directory of Abstract Plus, assigning it the same name as the RMF that is being replaced.

7. From within Abstract Plus, select an active display type and corresponding edit set.

8. **Thoroughly test the display type and edit set.** It is recommended that more than one person perform testing, and that the testers include very experienced registrars.

9. **Repeat steps 2–8** until the edit sets are complete.

10. **Forward a copy** of the RMF file to CDC's Registry Plus staff for inclusion in the local installation version of the program.

Other settings

CDC will specify some other settings to manage the behavior of your installation, such as language and versions of other programs used, and will assign an internal version number to your customized installation.

A user configuration file is created for each workstation logon (user.config) that opens the application. This file contains some settings saved from the Administration Preferences menu. These settings can be edited directly with CDC support, but should be managed through the menu selections.

Installation files

When you have provided all of these customizations to CDC, we will build a custom installation of Abstract Plus for the use of and distribution by your central registry. We will provide you with the installation files. These files can be posted on an Internet site for downloading by end users, or you can write it to a CD for distribution.

A distinct name will be given to each locale installation (*); *.msi and *setup.exe are used for the basic installation and combined are less than 50 MB. With both files available on the same path, the *setup.exe runs an install wizard.

ReportWizard.msi and ReportWizardSetup.exe are optional files intended for administrators and are used only for advanced report online help. Combined, these files are less than 45 MB. With both files available on the same path, the ReportWizardSetup.exe runs an install wizard. The installation makes available the Reports menu, Report Generator Help options.

IT Personnel Requirements and Recommended Availability to Support Abstract Plus

CDC provides support and consultation to state central registries for their state-specific customization and distribution of Abstract Plus software. Users contact the state central registry for the customized state installation, if available, and for general support and troubleshooting. The central registry will need one or more individuals with experience in one or more of the following areas to support for Abstract Plus, depending on the configuration selected:

- General IT support
- Network security
- Database administration
- Server administration

In a typical setting, the following routine installation and support tasks need to be carried out by the above-referenced IT or local support personnel:

General IT support

Install and Upgrade the Desktop Application

1. Abstract Plus is installed on workstations.

2. Responsible IT personnel need administrative rights to install applications on users' computers and upgrade them as newer versions become available.

3. The administrator of the application settings should run the initial start-up of the application and create an application user ID for the user and administrator, if not the same.

4. Users need full rights on the application path.

5. Personnel need to be able to download installation files and upgrades from CDC's FTP site.

Each registry **must** have access to IT personnel who can perform the tasks above. The IT personnel should be readily accessible, as these tasks may need to be performed on a more frequent basis. These tasks typically require about one-half hour for each installation or upgrade. Initial setup of the applications may take longer. One person should be able perform the tasks above.

Start-up/conversion: 0.5 hours per workstation of general IT support

Optional: Write Special Programs

If the functionality in the application does not meet the registry's needs, the registry may need IT personnel to manipulate files and data and to create specialized reports. This may entail access to a programmer.

Ongoing: Number of hours locally determined, depending on tasks

Network security

Optional: Install and Administer Applications on the Network Server

Abstract Plus databases can be administered from a network server environment for the Microsoft Access default option. Installing the application directly in the network server environment is not recommended. Users can be given unique network database paths, with full rights. The master.mdb file included in the application \MDBS subfolder is copied to that path. The application configuration can include that path for the selection of the database folder.

If the application uses a network server, the IT personnel administering the server should be available for subsequent application upgrades and for maintenance.

Start-up/Conversion: 0.5 hours of network server administrator support

Database administration for the SQL Server option

Creation and Administration of Databases on the SQL Server

1. For the initial setup, databases need to be created on an Microsoft SQL Server; regular maintenance and backups need to be performed subsequently.

2. The responsible IT personnel need to be able to write SQL scripts to get counts, create specialized extracts, and perform direct updates to the database based on ad-hoc requests from registry users.

Each registry **must** have access to IT personnel who can perform the tasks above. The tasks above are best performed by an experienced database administrator (DBA); this person needs to be involved extensively during the initial setup of the applications. After the application is set up, backups and database maintenance need to be performed on a regular basis following the practice of the local data processing center. More complicated SQL scripts for specialized extracts and reports can be written by the DBA or by some other advanced user of Microsoft SQL Server.

Running CDC-Provided Database Scripts and Performing Minor Database Modifications
1. Some version changes to applications may require database changes; CDC/NPCR will send the scripts and procedures required to make these changes, and the responsible IT personnel should be able to run the scripts and effect database changes by using the SQL Management Studio.

2. Ideally, this person will also be able to write some simple SQL scripts to satisfy data requests from registry users.

Start-up/Conversion: 8 hours of database administrator support
Ongoing: 4 hours per month of database administrator support

Server administration

Server Setup and Maintenance
1. Initial server setup (if necessary).

2. Perform day-to-day management of the server operating system.

3. Test and deploy server equipment software and updates.

4. Profile and monitor assigned servers.

5. Maintain server performance.

6. Meet on-call expectations, including off-hours support.

7. Where applicable, the server administrator helps oversee the physical security, integrity, and safety of the server environment.

Each registry **must** have access to server hardware and IT support personnel for the server. The tasks above are best performed by an experienced server administrator; this person needs to be involved extensively during the initial setup of the server, and initially involved in establishing application connectivity.

Ongoing: Number of hours locally determined depending on local infrastructure, policy, and server environment